UNITED STATES PATENT AND TRADEMARK OFFICE

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10/002,026	11/15/2001	Paul J. Roy	14531.138	4997

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EXAMINER
JEAN GILLES, JUDE

ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/002,026	ROY ET AL.
	Examiner	Art Unit	
	Jude J. Jean-Gilles	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>*25 May 2005*</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>*01/08/2002*</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

This Action is in regards to the Reply received on 25 May, 2005.

Response to Amendment

1.   This action is responsive to the application filed on May 25th, 2005. Claims 1, 13, 20, and 31 were amended. Claims 38-39 are newly added. No claim has been cancelled. Claims 1-39 are pending. Claims 1-39 represent a method and apparatus for "scheduling and multiplexing data broadcast transmission over multiple steams."

Response to Arguments

2.   Applicant's arguments with respect to claims 1 13, 20, and 31 have been carefully considered, but are not deemed fully persuasive. Applicant's arguments are deemed moot in view of the following new ground of rejection as explained here below, necessitated both by Applicant's discussion with the Examiner on May 11, 2005, and by Applicant's substantial amendment (i.e., a method and an apparatus for scheduling and multiplexing data broadcast transmission over multiple steams) to the claims which significantly affected the scope thereof.

The dependent claims stand rejected as articulated in the First Office Action and all objections not addressed in Applicant's response are herein reiterated.

Information Disclosure Statement

3.   The references listed on the Information Disclosure Statement submitted on

01/16/2002 have been considered by the examiner (see attached PTO-1449A).

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1-8, 12-18, 20-27, 30-36, and 38-39** are rejected under 35 U.S.C. 102(e) as

being anticipated by Baber et al (Baber), Patent No. 6,546,428 B.

        Regarding **claim 1**, Baber discloses in a data broadcast system comprising one

or more streams for broadcasting data to client systems, wherein the data broadcast

system broadcasts a variety of data at particular times in order to meet demand for the

variety of data at the client systems, a method of generating a data stream of a

specified bandwidth for broadcast to one or more client systems (*figs. 1-3*) the method

comprising acts of:

        storing an identifier for at least one data source, the identifier indicating where

data to be included within the data stream may be obtained and a bandwidth allocation

associated with requirements for broadcasting the data (*column 9, lines 7-47*);

for each identifier, storing scheduling information that comprises a time when the

data from the at least one data source should be added to the data stream for broadcast

to the one or more client systems, wherein the scheduling information is stored only

after first checking any previously existing scheduling information to verify that adequate

bandwidth is available in the data stream for adding the data to the data steam at the

time specified by the scheduling information (*column 9, lines 7-65*);

requesting and receiving the data from the at least one data source; and at the

time specified in the scheduling information, adding the data obtained from the at least

one data source to the data stream, wherein the data is broadcast to the one or more

client systems in accordance with the scheduling information (*column 9, lines 7-47;*

column 15, lines 1-50).

Regarding **claim 2**, Baber discloses a method as recited in claim 1, wherein the

data stream comprises a plurality of sub-streams, the method further comprising acts of:

storing a plurality of identifiers for a plurality of data sources (*column 9, lines 7-*

65);

for each identifier, storing scheduling information that comprises a time when the

data from each of the plurality of sources should be added to the data stream for

broadcast to the one or more client systems, wherein the scheduling information

indicates that data from at least two of the data sources should be added to the data

stream for simultaneous broadcast to the one or more client systems (*column 9, lines*

7-65);

requesting and receiving the data from the at least two data sources; and

at the time specified in the scheduling information, adding the data obtained from the at least two data sources to distinct sub-streams within the data stream, whereby the data from the at least two data sources arrives at the one or more client systems simultaneously (*column 9, lines 7-65; column 15, lines 1-50*).

Regarding **claim 3**, Baber discloses a method as recited in claim 2, wherein at least one of the plurality of sub-streams is dedicated to broadcasting data in real time (*column 16, lines 3-65*).

Regarding **claim 4**, Baber discloses a method as recited in claim 2, wherein the data broadcast system further comprises (i) a scheduled content service for storing the plurality of identifiers and for storing scheduling information for each identifier (*column 27, lines 10-67; column 9, lines 29-67*), and (ii) a data broadcast service for requesting and receiving data from the data sources and for adding the data obtained from the data sources to the data stream (*column 9, lines 7-65*).

Regarding **claim 5**, Baber discloses a method as recited in claim 1, wherein the scheduling information further comprises at least one of (i) a time to begin broadcast of the data ,(ii) a retransmission frequency to increase the probability that static data is received by the one or more client systems, (iii) a refresh frequency to assure that dynamic data is updated at the one or more client systems , (iv) a time when a final broadcast of the data should end, (v) meta-data associated with the data, (vi) a bandwidth allocation for the data, and (vii) data size information for static data (*column 9, lines 7-65*).

Regarding **claim 6**, Baber discloses a method as recited in claim 1, wherein each

of the one or more clients is running one or more applications, and wherein the

broadcast data stream provides the data for each of the one or more applications to

consume (*column 9, lines 7-65*).

Regarding **claim 7**, Baber discloses a method as recited in claim 1, further

comprising an act of checking any previously existing scheduling information to verify

that bandwidth is available in the data stream prior to storing the scheduling information

(*column 9, lines 7-65*).

Regarding **claim 8**, Baber discloses a method as recited in claim 1, wherein the

data is of a known size, the method further comprising an act of calculating at least one

of (i) a recommended bandwidth for a specified refresh or retransmission frequency,

and (ii) a recommended refresh or retransmission frequency for a specified bandwidth

(*column 9, lines 7-65*).

Regarding **claim 12**, Baber discloses a method as recited in claim 1, further

comprising an act of delivering the data stream to a broadcaster for broadcast to the

one or more client systems (*column 9, lines 7-65*).

Regarding **claim 13**, Baber discloses in a data broadcast system comprising one

or more streams for broadcasting data to client systems, wherein the data broadcast

system broadcasts a variety of data at particular times in order to meet demand for the

variety of data at the client systems, a method of generating a data stream of a

specified bandwidth for broadcast to one or more client systems (*figs. 1-3*), the method

comprising steps for:

identifying at least one data source where data to be included within the data

stream may be obtained and a bandwidth allocation associated with requirements for

broadcasting the data (*column 9, lines 7-65*);

scheduling a time when data from each identified data source should be added to

the data stream for broadcast to the one or more client systems, the scheduled time

being a part of scheduling information for the data to be included within the data stream,

, wherein the scheduling information is used to schedule the time only after first

checking any previously existing scheduling information corresponding to the data

stream to verify that adequate bandwidth is available in the data stream for adding the

data to the data stream at the scheduled time (*column 9, lines 7-65*);

obtaining the data from the at least one data source; and at the time specified in

the scheduling information, generating the data stream with the data obtained from the

at least one data source, wherein the data broadcast to the one or more client systems

in accordance with the scheduling information (*column 9, lines 7-47; column 15, lines

1-50*).

Regarding **claim 14**, Baber discloses a method as recited in claim 13, wherein

the data stream comprises a plurality of sub-streams, the method further comprising

steps for:

identifying a plurality of data sources where data to be included within the data

stream may be obtained (*column 9, lines 7-47; column 15, lines 1-50*);

scheduling a time when data from each identified data source should be added to

the data stream for broadcast to the one or more client systems, wherein data from at

least two of the plurality of data sources is scheduled to be added to the broadcast data

stream simultaneously *(column 9, lines 7-47; column 15, lines 1-50)*;

obtaining the data from the at least two data sources; and

at the time specified in the scheduling information, generating the data stream

that comprises at least two distinct sub-streams with the data obtained from the at least

two data sources, whereby the data from the at least two data sources arrives at the

one or more client systems simultaneously *(column 9, lines 7-47; column 15, lines 1-*

50).

Claim 15 is substantially the same as **claim 3**, and is thus rejected for reasons

similar to those in rejecting **claim 3**.

Claim 16 is substantially the same as **claim 5**, and is thus rejected for reasons

similar to those in rejecting **claim 5**.

Regarding **claim 17**, Baber discloses a method as recited in claim 13, further

comprising a step for determining, based on any previously existing scheduling

information and prior to scheduling a time when data from each identified data source

should be added to the data stream, whether or not bandwidth is available in the data

stream *(column 28, lines 16-55)*.

Claim 18 is substantially the same as **claim 8**, and is thus rejected for reasons

similar to those in rejecting **claim 8**.

Regarding **claim 20**, Baber discloses a computer program product for

implementing, in a data broadcast system comprising one or more streams for

broadcasting data to client systems, wherein the data broadcast system broadcasts a

variety of data at particular times in order to meet demand for the variety of data at the
client systems, a method of generating a data stream of a specified bandwidth for
broadcast to one or more client systems (*figs. 1-3*), the computer program product
comprising:

a computer readable medium for carrying machine-executable instructions that
implement the method, wherein the method comprises acts of:

storing an identifier for at least one data source, the identifier indicating
where data to be included within the data stream may be obtained and a
bandwidth allocation associated with requirements for broadcasting the data
(*column 9, lines 7-47; column 15, lines 1-50*);

for each identifier, storing scheduling information that comprises a time
when the data from the at least one data source should be added to the data
stream for broadcast to the one or more client systems, wherein the scheduling
information is stored only after first checking any previously existing scheduling
information to verify that adequate bandwidth is available in the data stream for
adding the data to the data steam at the time specified by the scheduling
information (*column 9, lines 7-47; column 15, lines 1-50*);

requesting and receiving the data from the at least one data source; and
at the time specified in the scheduling information, adding the data obtained from
the at least one data source to the data stream, wherein the data is broadcast to
the one or more client systems in accordance with the scheduling information
(*column 9, lines 7-47; column 15, lines 1-50*).

Regarding **claim 21**, Baber discloses a computer program product as recited in

claim 20, wherein the data stream comprises a plurality of sub-streams, the method

further comprising acts of:

storing a plurality of identifiers for a plurality of data (*column 9, lines 7-47;*

column 15, lines 1-50);

for each identifier, storing scheduling information that comprises a time when the

data from each of the plurality of sources should be added to the data stream for

broadcast to the one or more client systems, wherein the scheduling information

indicates that data from at least two of the data sources should be added to the data

stream for simultaneous broadcast to the one or more client systems (*column 9, lines*

7-47; column 15, lines 1-50);

requesting and receiving the data from the at least two data sources; and at the

time specified in the scheduling information, adding the data obtained from the at least

two data sources to distinct sub-streams within the data stream, whereby the data from

the at least two data sources arrives at the one or more client systems simultaneously

(*column 9, lines 7-47; column 15, lines 1-50*).

Claim 22 lists all the same elements of **claim 3**, but in computer program form

rather than method form. Therefore, the supporting rationale of the rejection to **claim 3**

applies equally as well to **claim 22**.

Claim 23 lists all the same elements of **claim 4**, but in computer program form rather than method form. Therefore, the supporting rationale of the rejection to **claim 4** applies equally as well to **claim 23**.

Claim 24 lists all the same elements of **claim 5**, but in computer program form rather than method form. Therefore, the supporting rationale of the rejection to **claim 5** applies equally as well to **claim 24**.

Claim 26 lists all the same elements of **claim 7**, but in computer program form rather than method form. Therefore, the supporting rationale of the rejection to **claim 7** applies equally as well to **claim 26**.

Claim 27 lists all the same elements of **claim 8**, but in computer program form rather than method form. Therefore, the supporting rationale of the rejection to **claim 8** applies equally as well to **claim 27**.

Claim 30 lists all the same elements of **claim 12**, but in computer program form rather than method form. Therefore, the supporting rationale of the rejection to **claim 12** applies equally as well to **claim 30**.

Claim 31 lists all the same elements of **claim 13**, but in computer program product form rather than system form. Therefore, the supporting rationale of the rejection to **claim 13** applies equally as well to **claim 31**.

Claim 32 lists all the same elements of **claim 14**, but in computer program product form rather than system form. Therefore, the supporting rationale of the rejection to **claim 14** applies equally as well to **claim 32**.

Claim 33 lists all the same elements of **claim 3**, but in computer program product form rather than method form. Therefore, the supporting rationale of the rejection to **claim 3** applies equally as well to **claim 33**.

Claim 34 lists all the same elements of **claim 5**, but in computer program product form rather than method form. Therefore, the supporting rationale of the rejection to **claim 5** applies equally as well to **claim 34**.

Claim 35 lists all the same elements of **claim 17**, but in computer program product form rather than method form. Therefore, the supporting rationale of the rejection to **claim 17** applies equally as well to **claim 35**.

Claim 36 lists all the same elements of **claim 8**, but in computer program product form rather than method form. Therefore, the supporting rationale of the rejection to **claim 8** applies equally as well to **claim 36**.

Regarding **claim 37**, Baber discloses a method as recited. In claim 1, the method further including recommending a refresh or retransmission frequency for data having a specified bandwidth [*see Baber; column 9, lines 7-47; column 15, lines 1-50*].

Regarding **claim 21**, Baber discloses a method as recited in claim 1, wherein the data stream is broadcast to a

plurality of clients even though it is only intended to be consumed by one of the clients and accordingly consumed by only one of the clients [*see Baber; column 9, lines 7-47; column 15, lines 1-50*].

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 9-10, 11, 19, 28-29, and 37** are rejected under 35 U.S.C. 103(a) as

being unpatentable over Baber, in view of Srinivasan et al. (Srinivasan), U.S.

Patent No. 6,357,042 B2.

Regarding **claim 9**, Baber teaches the invention substantially as claimed.

Gifford discloses a method as recited in claim 1, but does not specifically

disclose the identifier for the at least one data source as being a uniform

resource identifier or uniform resource locator.

In the same field of endeavor, Srinivasan discloses "*a video stream that is*

identified and tracked based on the URL of the advertiser" [*see Srinivasan;*

column 17, lines 6-51; column 32, lines 12-31].

Accordingly, it would have been obvious to one of ordinary skill in the

networking art at the time the invention was made to have incorporated

Srinivasan's teachings of a method and apparatus to ruse a uniform resource

locator as an identifier, with the teachings of Baber, for the purpose of

"*enhancing the streams with authored metadata in a manner to be completely*

useful when finally delivered to the end user, and many interactive functions..."

as stated by Srinivasan in lines 55-62 of column 3. By this rationale **claim 9** is rejected.

Regarding **claim 10**, the combination Baber-Srinivasan teaches a method as recited in claim 1, wherein the data comprises one or more files and the scheduling information further comprises meta-data associated with each of the one or more files, the meta-data comprising at least one of (i) an expiration time after which the one or more clients may delete a file, (ii) an extension time for extending the expiration time of a file that already exists, (iii) one or more allowed update flags if a file represents a directory, (iv) a trigger for causing some action to be performed at a client system, (v) one or more expressions for specifying one or more conditions that are associated with a file [*see Srinivasan, column 32, lines 12-56*]. The same motivation that was utilized in the combination of claim 9, applies equally as well to claim 10 [*see* Srinivasan, *column 4, lines 55-62*]. By this rationale **claim 10** is rejected.

Regarding **claim 11**, the combination Baber-Srinivasan teaches a method as recited in claim 10, further comprising the act of adding the meta-data to the data stream [*see Srinivasan, column 32, lines 12-56*]. The same motivation that was utilized in the combination of claim 9, applies equally as well to claim 10 [*see* Srinivasan, *column 4, lines 55-62*]. By this rationale **claim 10** is rejected.

Claim 19 is substantially the same as **claim 10**, and is thus rejected for reasons similar to those in rejecting **claim 10**.

Claim 28 lists all the same elements of **claim 9**, but in computer program

form rather than method form. Therefore, the supporting rationale of the

rejection to **claim 9** applies equally as well to **claim 28**.

Claim 29 lists all the same elements of **claim 10**, but in computer program

form rather than method form. Therefore, the supporting rationale of the

rejection to **claim 10** applies equally as well to **claim 29**.

Claim 37 lists all the same elements of **claim 10**, but in computer program product form

rather than method form. Therefore, the supporting rationale of the rejection to **claim**

10 applies equally as well to **claim 37**.

Response to Arguments

8.   Applicant's Request for Reconsideration filed on May 25th, 2005 has been

carefully considered but is not deemed fully persuasive. However, because there exists

the likelihood of future presentation of this argument, the Examiner thinks that it is

prudent to address Applicants' main points of contention.

A. Applicant contends that the cited art (Peters and Srinivasan) fails either singly

or in combination to anticipate or obviate the claimed invention.

B. Applicant contends that Peters fails to describe how to schedule the transfer of data from the selected storage units.

C. Applicant contends that Peters does not deal with generating a data stream/broadcast that is broadcast.

D. Applicant contends that Peters fails to anticipate or describe such an embodiment that further includes recommending a refresh or retransmission frequency for data having a specified bandwidth (claim 38) or within the data stream is broadcast to a plurality of clients.

9.   As to "Point A" it is the position of the Examiner that Peters in detail teaches the limitations of the above-mentioned claims. However, in view of Applicant's remarks, stating that Peters does not anticipate claims **1-8, 12-18, 20-27, 30-36, and 38-39**, the Examiner use the patent of Baber the reject claims **1-8, 12-18, 20-27, 30-36, and 38-39** under new grounds in this office action [see rejection of claims 1-8, 12-18, 20-27, 30-36, and 38-39 above].

As to "Point B, C, and D , see point A above.

Conclusion

10.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE NON-FINAL.**

11.   Any inquiry concerning this communication or earlier communications from examiner should be directed to Jude Jean-Gilles whose telephone number is (571) 272-3914. The examiner can normally be reached on Monday-Thursday and every other Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley, can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-9000.

Jude Jean-Gilles

Patent Examiner

Art Unit 2143

JJG

August 21, 2005

DAVID WILEY
SUPERVISORY PATENT EXAMINER
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